

In the Claims

✓ Please cancel claims 1-26 and replace them with the following claims 27-88.

27. A height adjustable supporting structure for furniture components comprising:

at least one leg, wherein the at least one leg comprises;

a floor contacting base; and

a height adjustable column disposed on said base, said height adjustable column comprising; a locking telescoping spring mechanism, said telescoping spring mechanism comprising an actuation button that extends outwardly from said telescoping spring mechanism; a first fulcrum surface; a second fulcrum surface, said actuation button disposed opposite and between said first and said second fulcrum surfaces; and a first actuation lever, said first actuation lever extending from said first fulcrum surface to said second fulcrum surface and disposed between said actuation button and said first and said second fulcrum surfaces,

Q18 wherein movement of said actuation lever away from said first fulcrum surface or said second fulcrum surface, or movement of said actuation lever away from said first fulcrum surface and said second fulcrum surface causes said actuation lever to depress said actuation button to actuate said telescoping spring mechanism.

28. The height adjustable supporting structure of claim 27, wherein said height adjustable column further comprises a first substantially upright surface comprising an inside surface facing said actuation button, and an outside surface facing away from said actuation button, said first substantially upright surface comprising an enlarged opening in which said actuation lever moves;

wherein said actuation lever comprises a first handle section disposed outside said first substantially upright surface and extends from said enlarged opening of said first substantially upright surface to said second fulcrum surface, and movement of said actuation lever away from said first or said second fulcrum surfaces or movement of said actuation lever away from said first fulcrum surface and said second fulcrum surface causes said lever to depress said actuation button to actuate said telescoping spring mechanism.

29. The height adjustable supporting structure of claim 28, wherein said height adjustable column further comprises a second substantially upright surface opposing said first substantially upright surface, said actuation button of said telescoping spring mechanism disposed between said first and second substantially upright surfaces, said second substantially upright surface comprising an inside surface facing said actuation button and an outside surface facing away from said actuation button, said second substantially upright surface further comprising an enlarged opening in which said first actuation lever moves, and wherein said first actuation lever comprises a first handle section disposed outside said first substantially upright surface, and a second section which extends from said enlarged opening of said first substantially upright surface to said enlarged opening of said second substantially upright surface,

wherein movement of said first handle section of said actuation lever in either of two directions pivots said second section of said lever causing said lever to depress said actuation button to actuate said telescoping spring mechanism, and

wherein movement of said actuation lever away from said first or said second fulcrum surfaces or movement of said actuation lever away from said first fulcrum surface and said second fulcrum surface causes said lever to depress said actuation button to actuate said telescoping spring mechanism.

30. The height adjustable supporting structure of claim 29, wherein said first actuation lever further comprises a third handle section extending outwardly from said second substantially upright surface,

wherein movement of said third handle section of said actuation lever in either of two directions pivots said second section of said lever causing said lever to depress said actuation button to actuate said telescoping spring mechanism.

31. The height adjustable supporting structure of claim 27, wherein said height adjustable column further comprises a third fulcrum surface generally orthogonally to said first and said second fulcrum surfaces, and a second actuation lever, said second actuation lever disposed generally orthogonally to said first actuation lever and extending from said third fulcrum surface to said first actuation lever, said second actuation lever disposed between said actuation button and said first, said second and said third fulcrum surfaces,

wherein rotating or moving said second actuation lever away from any or all of said first, said second or said third fulcrum surfaces causes said lever to depress said actuation button to actuate said telescoping spring mechanism.

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Cont. 32. The height adjustable supporting structure of claim 31, wherein said height adjustable column further comprises a third substantially upright surface, said third substantially upright surface comprising an inside surface facing said actuation button, and an outside surface facing away from said actuation button, said third substantially upright surface further comprising an enlarged opening in which said second actuation lever moves, said second actuation lever comprising a first handle section disposed outside said third substantially upright surface and extending from said enlarged opening of said third substantially upright surface to said actuation button.

33. The height adjustable supporting structure of claim 31, wherein said height adjustable column further comprises a fourth fulcrum surface disposed opposite said third fulcrum surface, said actuation button disposed between said opposing third and said fourth fulcrum surfaces, and said second actuation lever extending from said third fulcrum surface to said fourth fulcrum surface and disposed between said actuation button and said third and said fourth fulcrum bearing surfaces,

wherein movement of said second actuation lever away from any or all of said first, said second, said third or said fourth fulcrum surfaces causes said second actuation lever to depress said actuation button to actuate said telescoping spring mechanism.

6 34. The height adjustable supporting structure of claim 33, wherein said height adjustable column further comprises a fourth substantially upright surface, said fourth substantially upright surface comprising an inside surface facing said actuation button, and an outside surface facing away from said actuation button, said fourth substantially upright surface comprising an enlarged opening in which said second actuation lever moves, and wherein said second actuation lever comprises a second section extending from said enlarged opening of said third substantially upright surface to said enlarged opening of said fourth substantially upright surface,

wherein movement of said first handle section of said actuation lever pivots said second section of said second lever to depress said actuation button to actuate said telescoping spring mechanism, and

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Cont'd wherein movement of the second actuation lever away from any or all of said first, said second, said third or said fourth fulcrum surfaces causes said lever to depress said actuation button and actuate said telescoping spring mechanism.

C 35. The height adjustable supporting structure of claim 34, wherein said second actuation lever further comprises a third handle section extending outwardly from said fourth substantially upright surface,

wherein movement of said third handle section in either of two directions causes said actuation lever to depress said actuation button to actuate said telescoping spring mechanism.

6 36. The height adjustable supporting structure of claim 31, wherein said second actuation lever is disposed at a different elevation than said first actuation lever.

37. The height adjustable supporting structure of claim 31, wherein rotating said second actuation lever causes said first or said second actuation lever to move away from at least one of said fulcrum surfaces causing said lever to depress said actuation button to actuate said telescoping spring mechanism.

38. The height adjustable supporting structure of claim 28, wherein said height adjustable column further comprises a coaxial cable, said coaxial cable comprising an outer sheath and an inside cable, said outer sheath fixedly attached to said first substantially upright surface, and said inside cable attached to a section of said first actuation lever, said section at least laterally adjacent said actuation button,

wherein movement of said first actuation lever caused by axial displacement of said inside cable and said outside sheath causes said lever to depress said actuation button to actuate said telescoping spring mechanism.

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39. The height adjustable supporting structure of claim 32, wherein said height adjustable column further comprises a coaxial cable, said coaxial cable comprising an outer sheath and an inside cable, said outer sheath fixedly attached to said third substantially upright surface, and said inside cable attached to a section said second actuation lever, said section at least laterally adjacent said actuation button,

wherein movement of said second actuation lever caused by axial displacement of said inside cable and said outside sheath causes said lever to depress said actuation button to actuate said telescoping spring mechanism.

40. The height adjustable supporting structure of claim 30, further comprising a ring connecting said first and said third handle sections of said first actuation lever and encircling said height adjustable column.

41. The height adjustable supporting structure of claim 35, further comprising a ring connecting said first and said third handle sections of said first and said second actuation lever.

42. The height adjustable supporting structure of claim 35, further comprising a ring connecting said first and said third handle sections of said first and said second actuation levers.

43. The height adjustable supporting structure of claim 30, wherein said structure comprises at least two height adjustable columns and a ring connecting said first or third sections of said actuation levers of said telescoping spring mechanisms.

44. The height adjustable supporting structure of claim 27, wherein said telescoping spring mechanism comprises a cylinder section and a piston section.

45. The height adjustable supporting structure of claim 44, wherein said height adjustable column further comprises a stand tube, said stand tube comprising an opening on one end; wherein said cylinder section moves vertically within said opening of said stand tube.

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46. The height adjustable supporting structure of claim 27, wherein said height adjustable column further comprises a bottom tube and a top tube, said top tube disposed in telescoping arrangement with said bottom tube, and said locking telescoping spring mechanism disposed within said top and said bottom tubes.

47. The height adjustable supporting structure of claim 46, wherein said top tube further comprises a telescoping spring mechanism support surface, said telescoping spring attached to said support surface,

wherein said telescoping spring mechanism, when actuated, pushes against said telescoping spring mechanism support surface.

48. The height adjustable supporting structure of claim 47, wherein said bottom tube comprises a telescoping spring mechanism support surface, said telescoping spring attached to said telescoping spring mechanism support surface,

wherein said telescoping spring mechanism, when actuated, pushes against said telescoping spring mechanism support surface.

49. The height adjustable supporting structure of claim 46, further comprising a furniture component support, said top tube attached to said furniture component support and depending downwardly therefrom.

50. The height adjustable supporting structure of claim 45, further comprising a furniture component support, said stand tube attached to said furniture component support and depending downwardly therefrom.

51. The height adjustable supporting structure of claim 28, wherein said first handle section of said first actuation lever extends to a point proximate a top surface of said base when said height adjustable column is contracted to its lowest elevation.

52. A height adjustable supporting structure for furniture components comprising:

at least one leg, wherein said at least one leg comprises;

a floor contacting base, and

a height adjustable column disposed on said base, said height adjustable column comprising a locking telescoping spring mechanism, said telescoping spring mechanism comprising an actuation button that extends outwardly from said telescoping spring mechanism; a first bearing surface disposed opposite said actuation button; and a first actuation lever disposed between said first bearing surface and said actuation button, said actuation lever comprising a cam lobe, and wherein said actuation lever can rotate on said bearing surface,

wherein movement of said first actuation lever away from said first bearing surface causes said actuation lever to depress said actuation button to actuate said telescoping spring mechanism.

53. The height adjustable supporting structure of claim 52, wherein said cam lobes are formed by removal of a portion of the outside diameter of said actuation lever.

54. The height adjustable supporting structure of claim 52, wherein said height adjustable column further comprises a first substantially upright surface, said first substantially upright surface comprising an inside surface facing said actuation button, and an outside surface facing away from said actuation button, said first substantially upright surface comprising an opening in which said first actuation lever can rotate,

wherein said actuation lever comprises a first handle section disposed outside said first substantially upright surface and a second section extending from said opening of said first substantially upright surface to at least said actuation button.

55. The height adjustable supporting structure of claim 52, wherein said cam lobe is disposed specifically opposite said actuation button,

wherein rotating said first actuation lever on said first bearing surface results in movement of said cam lobe away from said first bearing surface causing said cam lobe to depress said actuation button to actuate said telescoping spring mechanism.

56. The height adjustable supporting structure of claim 52, wherein said cam lobe is disposed at least adjacent said first bearing surface,

wherein rotating said first actuation lever on said first bearing surface causes said lever to move away from said first bearing surface and to depress said actuation button to actuate said telescoping spring mechanism.



57. The height adjustable supporting structure of claim 54, said height adjustable column further comprising a second bearing surface, said actuation button disposed opposite and between said first and said second bearing surfaces, said first actuation lever extending from said first bearing surface to said second bearing surface and disposed between said actuation button and said first and said second bearing surfaces,

wherein rotating or pivoting said first actuation lever away from one of said bearing surfaces, or rotating and pivoting said first actuation lever away from one of said bearing surfaces causes said lever to depress said actuation button to actuate said telescoping spring mechanism.

58. The height adjustable supporting structure of claim 57, wherein said cam lobe is disposed at least adjacent said second bearing surface.

59. The height adjustable supporting structure of claim 57, wherein said height adjustable column further comprises a second substantially upright surface opposing said first substantially upright surface, said actuation button disposed between said first and said second substantially upright surfaces, said second substantially upright surface comprises an inside surface facing said actuation button and an outside surface facing away from said actuation button, said second substantially upright surface further comprising an opening in which said first actuation lever can rotate, wherein said second section of said first actuation lever extends from said opening of said first substantially upright surface to said opening of said second substantially upright surface,

wherein rotating said actuation lever causes said lever to depress said actuation button to actuate said telescoping spring mechanism.

60. The height adjustable supporting structure of claim 59, wherein said actuation lever further comprises a third handle section extending outwardly from said second substantially upright surface.

61. The height adjustable supporting structure of claim 59, wherein said first substantially upright surface comprises an enlarged opening, and

wherein rotating or pivoting said first actuation lever away from said bearings surfaces, or rotating and pivoting said first actuation lever away from said bearing surfaces causes said lever to depress said actuation button to actuate said telescoping spring mechanism.

62. The height adjustable supporting structure of claim 57, wherein said second substantially upright surface comprises an enlarged opening,

wherein rotating or pivoting said first actuation lever in either of two directions or rotating and moving said first actuation lever in either of two directions causes said actuation button to be depressed to actuate said telescoping spring mechanism.

63. The height adjustable supporting structure of claim 57, wherein said height adjustable column further comprises a third bearing surface on which said second actuation lever can rotate and a second actuation lever, said second actuation lever disposed generally orthogonally to said first actuation lever and extending from said third bearing surface to said first actuation lever, said second actuation lever disposed between said third bearing surface and said actuation button,

wherein rotating said second actuation lever causes said actuation button to be depressed to actuate said telescoping spring mechanism.

64. The height adjustable supporting structure of claim 63, wherein said second actuation lever comprises a cam lobe.

65. The height adjustable supporting structure of claim 64, wherein said cam lobe of said second actuation lever is disposed specifically opposite said actuation button.

66. The height adjustable supporting structure of claim 64, wherein said cam lobe of said second actuation lever is disposed at least adjacent said third bearing surface.

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67. The height adjustable supporting structure of claim 63, wherein said height adjustable column further comprises a third substantially upright surface, said third substantially upright surface comprising an inside surface facing said actuation button, and an outside surface facing away from said actuation button, said third substantially upright surface further comprising an opening in which said second actuation lever can rotate, said third bearing surface generally orthogonally disposed to said first and said second bearing surfaces and generally orthogonally to said first actuation lever, said second actuation lever comprising a first handle section disposed outside said third substantially upright surface and a second section extending from said opening of said third substantially upright surface to said actuation button,

wherein movement of said second actuation lever away from any or all of said bearing surfaces causes said actuation button to be depressed to actuate said telescoping spring mechanism.

68. The height adjustable supporting structure of claim 63, wherein said adjustable column further comprises a fourth bearing surface disposed opposite said third bearing surface, and said actuation button disposed between said opposing third and said fourth bearing surfaces, said second actuation lever extending from said third fulcrum bearing surface to said fourth bearing surface and disposed between said actuation button and said third and said fourth fulcrum bearing surfaces;

wherein movement of said second actuation lever away from any or all of said bearing surfaces causes said actuation button to be depressed to actuate said telescoping spring mechanism.

69. The height adjustable supporting structure of claim 68, wherein said cam lobe on said second actuation lever is disposed at least adjacent to said fourth bearing surface.

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70. The height adjustable supporting structure of claim 68, wherein said height adjustable column further comprises a fourth substantially upright surface, said fourth substantially upright surface comprising an inside surface facing said actuation button, and an outside surface facing away from said actuation button, said fourth substantially upright surface comprising an opening in which said second actuation lever can rotate, and wherein said second actuation lever comprises a first section disposed outside said third substantially upright surface and a second section extending from said opening of said third substantially upright surface to said opening of said fourth substantially upright surface,

wherein rotating said second actuation lever causes said actuation button to be depressed to actuate said telescoping spring mechanism.

71. The height adjustable supporting structure of claim 70, wherein said second actuation lever further comprises a third handle section extending outwardly from said fourth substantially upright surface.

72. The height adjustable supporting structure of claim 67, wherein said third substantially upright surface comprises an enlarged opening,

wherein rotating or pivoting said second actuation lever away from said first, said second, said third or said fourth bearing surface, or rotating and pivoting said second actuation lever away from said first, said second, said third or said fourth bearing surfaces causes said lever to depress said actuation button to actuate said telescoping spring mechanism.

73. The height adjustable supporting structure of claim 70, wherein said fourth substantially upright surface comprises an enlarged opening,

wherein rotating or pivoting said second actuation lever in either of two directions, or rotating and pivoting said second actuation lever in either of two directions causes said actuation button to be depressed to actuate said telescoping spring mechanism.

74. The height adjustable supporting structure of claim 63, wherein said second actuation lever is disposed at a different elevation than said first actuation lever.

75. The height adjustable supporting structure of claim 60, wherein said height adjustable column further comprises a coaxial cable, said coaxial cable comprising an outer sheath fixedly attached to said first substantially upright surface, an inside cable attached to said a section of first actuation lever, said section laterally adjacent said actuation button;

wherein movement of said first actuation lever caused by axial displacement of said inside cable and said outside sheath causes said lever to depress said actuation button to actuate said telescoping spring mechanism.

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76. The height adjustable supporting structure of claim 67, wherein said height adjustable column further comprises a coaxial cable, said coaxial cable comprising an outer sheath fixedly attached to said third substantially upright surface, and an inside cable attached to a section of said second actuation lever, said section laterally adjacent said actuation button,

wherein movement of said first actuation lever caused by axial displacement of said inside cable and said outside sheath causes said lever to depress said actuation button to actuate said telescoping spring mechanism.

77. The height adjustable supporting structure of claim 60, wherein said height adjustable column further comprises a ring connecting said first and said third handle sections of said first actuation lever and encircling said height adjustable column.

78. The height adjustable supporting structure of claim 67, wherein said height adjustable column further comprises a ring connecting said first and said third handle sections of said first and said second actuation lever.

79. The height adjustable supporting structure of claim 71, wherein said height adjustable column further comprises a ring connecting said first and said third handle sections of said first and said second actuation levers.

80. The height adjustable supporting structure of claim 52, wherein said telescoping spring mechanism comprises a cylinder section and a piston section.

81. The height adjusting supporting structure of claim 80, wherein said height adjustable column further comprises a stand tube, said stand tube comprising an opening on one end, wherein said cylinder of said telescoping spring can move vertically within said opening.

82. The height adjustable supporting structure of claim 52, wherein said height adjustable column comprises a bottom tube and a top tube, said top tube disposed in telescoping arrangement with said bottom tube, and said locking telescoping spring mechanism is disposed within said top and said bottom tubes.

83. The height adjustable supporting structure of claim 82, wherein said top tube includes said first substantially upright surface.

84. The height adjustable supporting structure of claim 83, wherein said top tube further comprises a telescoping spring mechanism support surface, said telescoping spring attached to said telescoping spring mechanism support surface,

wherein said telescoping spring mechanism, when actuated, pushes against said telescoping spring mechanism support surface.

85. The height adjustable supporting structure of claim 82, wherein said bottom tube comprises said first substantially upright surface.

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86. The height adjustable supporting structure of claim 85, wherein said bottom tube comprises a telescoping spring mechanism support surface, said telescoping spring attached to said telescoping spring mechanism support surface,

wherein said telescoping spring mechanism, when actuated, pushes against said telescoping spring mechanism support surface.

87. The height adjustable supporting structure of claim 83, further comprising a furniture component support said top tube attached to said furniture component support and depending downward therefrom.

88. The height adjustable supporting structure of claim 52, wherein said first handle section of said first actuation lever extends to a point proximate a top surface of said base when said height adjustable column is contracted to its lowest elevation.

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